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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/885,077	06/21/2001	Kevin Wade Jameson		3816

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EXAMINER
ROCHE, TRENTON J

ART UNIT	PAPER NUMBER
2124	

DATE MAILED: 06/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	Application No.	Applicant(s)	
	09/885,077	JAMESON, KEVIN WADE	
	Examiner	Art Unit	
	Trent J Roche	2124	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _23 July 2002_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-27_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-27_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _21 June 2001_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   This office action is responsive to Amendment A filed 23 July 2002.

2.   Claims 1-27 have been examined.

Information Disclosure Statement

3.   The information disclosure statement (IDS) submitted on 21 June 2001 stated that the

applicant conducted a professional search but found no relevant prior art.

Claim Rejections - 35 USC § 112

4.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject
> matter which the applicant regards as his invention.

5.   Claims 1-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for

failing to particularly point out and distinctly claim the subject matter which applicant regards as the

invention.

Claims 1-27 recite functional language stating that the claimed limitations provide solutions to a

number of problems surrounding makefiles, and that their solutions provide human programmers

the ability to perform actions in an automated, scalable way that was not previously available.

However, it is unclear what steps of the claims are associated with the functional language. For

example, in claim 1, a solution to the collection makefile generator problem is established, but it is

unclear as to what step or process in the claim provides this solution, as opposed to alternate prior

art which discloses the generation of makefiles. Furthermore, no indication is made that any of the

steps provide an *automated and scalable* (emphasis added) way to generate collection makefiles. As

such, it is unclear as to what performs the claimed functionality. Claims 2-27 are indefinite for

similar reasoning.

Claim Rejections - 35 USC § 102

6.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7.   Claims 1-4, 6, 10-13, 15, 19-22 and 24 are rejected under 35 U.S.C. 102(b) as being

anticipated by U.S. Patent 6,032,198 to Fujii et al, hereafter referred to as Fujii.

Regarding claim 1:

Fujii teaches:

- a collection makefile generator process for generating makefiles for collections (Note Figure

    2 and the corresponding sections of the disclosure)

- receiving a request to generate a makefile for a collection ("The generation of the makefile is

    performed by the makefile generation unit which is one subprogram of the editor unit" in

    col. 8 lines 63-65. A request is inherently sent to the makefile generation unit, so that the unit

    may generate the makefile.)

- accessing collection information for said collection ("the makefile generation unit fetches the

    skeleton source and header files names and the stub source and header file names from the

    document management function in accordance with the object ID's..." in col. 9 lines 20-23)

- generating a makefile for said collection ("the makefile generation unit generates a compile command for each source file name acquired...and writes the generated compile command into the makefile" in col. 9 lines 46-49)

- wherein collections are data structures comprised of a collection specifier ("an object ID" in col. 9 line 6)

- collection content containing zero or more collection content files ("the skeleton source and header files names and the stub source and header file names from the document management function in accordance with the object ID's..." in col. 9 lines 21-23)

- wherein a collection specifier contains information about a collection instance, and wherein collection membership information describes collection content ("The makefile generation unit acquires interface definition information associated with the application symbol information from the interface information management unit... the skeleton source and header files names and the stub source and header file names from the document management function in accordance with the object ID's..." in col. 9 lines 7-23)

substantially as claimed. Fujii does not explicitly describe providing a solution to the collection makefile generator problem, and thereby enabling human programmers to generate collection makefiles in a fully-automated, scalable way, however, the structural elements described in the claim have been shown to exist in the system disclosed by Fujii. Accordingly, the system of Fujii must inherently provide a solution to the collection makefile generator problem, and thereby enable human programmers to generate collection makefiles in a fully-automated, scalable way.

Regarding claim 2:

The rejection of claim 1 is incorporated, and further, Fujii discloses using makefile service and makefile fragment template information as claimed ("the makefile generation unit fetches the skeleton source and header files names and the stub source and header file names from the document management function in accordance with the object ID's..." in col. 9 lines 20-23. The skeleton code is used as a template.) Fujii does not explicitly describe providing a solution to the makefile customization problem, and thereby enabling human programmers to extensively customize the makefile generation process by controlling the information content of fragments used to implement makefile services in an automated, scalable way, however, the structural elements described in the claim have been shown to exist in the system disclosed by Fujii. Accordingly, the system of Fujii must inherently provide a solution to the makefile customization problem, and thereby enable human programmers to extensively customize the makefile generation process by controlling the information content of fragments used to implement makefile services in an automated, scalable way.

Regarding claim 3:

The rejection of claim 1 is incorporated, and further, Fujii discloses using substitution strings representing collection instance values to replace placeholder strings in makefile fragments as claimed ("the makefile generation unit fetches the skeleton source and header files names and the stub source and header file names from the document management function in accordance with the object ID's..." in col. 9 lines 20-23. The skeleton source is used as placeholders until the stub source replaces the generic information with detailed information.) Fujii does not explicitly describe providing a solution to the multiple product naming problem, nor helping to solve the makefile customization program, and thereby enabling human programmers to use practical placeholder

strings to represent useful collection instance information values in makefile fragments in a more convenient way, however, the structural elements described in the claim have been shown to exist in the system disclosed by Fujii. Accordingly, the system of Fujii must inherently provide a solution to the multiple product naming problem and help to solve the makefile customization problem, and thereby enable human programmers to use practical placeholder strings to represent useful collection instance information values in makefile fragments in a more convenient way.

Regarding claim 4:

The rejection of claim 1 is incorporated, and further, Fujii discloses using standalone makefile service information as claimed ("Application symbol information of all the thus specified operation providing applications is acquired from the application information management unit..." in col. 9 lines 32-35) Fujii does not explicitly describe helping to solve the makefile customization program, and thereby enabling human programmers to further additively customize generated makefiles by specifying ad hoc additions to the generated makefiles in the form of standalone makefile service statements within collection specifiers, however, the structural elements described in the claim have been shown to exist in the system disclosed by Fujii. Accordingly, the system of Fujii must inherently help to solve the makefile customization problem, and thereby enable human programmers to further additively customize generated makefiles by specifying ad hoc additions to the generated makefiles in the form of standalone makefile service statements within collection specifiers.

Regarding claim 6:

The rejection of claim 1 is incorporated, and further, Fujii discloses using information selected from the group consisting of include file search directory information and library file search directory information as claimed ("the makefile generation unit fetches the skeleton source and header files names and the stub source and header file names from the document management function in accordance with the object ID's stored in interface definition information..." in col. 9 lines 20-24) Fujii does not explicitly describe providing solutions to the include file directory problem and the library file directory problem, and thereby helping to improve the runtime performance of compilers and linkers by providing them with optimal lists of include file and library search directories to search during compilation and linking operations, however, the structural elements described in the claim have been shown to exist in the system disclosed by Fujii. Accordingly, the system of Fujii must inherently provide solutions to the include file directory problem and the library file directory problem, and thereby help to improve the runtime performance of compilers and linkers by providing them with optimal lists of include file and library search directories to search during compilation and linking operations.

Regarding claims 10-13, 15, 19-22 and 24:

Claims 10-13 and claims 15 and 19-22 and 24 recite a programmable device and a computer readable memory encoded with data, respectively, for directing a computer to perform the process of claims 1-4 and 6, respectively, and are therefore rejected for the reasons set forth in connection with claims 1-4 and 6, respectively.

Claim Rejections - 35 USC § 103

8.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9.   Claims 5, 7-9, 14, 16-18, 23 and 25-27 are rejected under 35 U.S.C. 103(a) as being

unpatentable over U.S. Patent 6,032,198 to Fujii et al, hereafter referred to as Fujii, in view of U.S.

Patent Publication 2002/0147855 A1 to Lu.

Regarding claim 5:

The rejection of claim 1 is incorporated, and further, Fujii des not explicitly disclose using virtual

platform information. Lu discloses in an analogous system for generating makefiles the use of virtual

platform information as claimed ("preferably written in a platform independent language such as, for

example, Java..." in paragraph 0064). It would have been obvious to one of ordinary skill in the art

at the time the invention was made to use the platform independence of Lu with the system for

generating makefiles disclosed by Fujii, as this would allow a developer to create a single version of a

makefile which is independent of the shell and makefile interpreters employed, as stated in

paragraph 0147 of Lu. Neither Fujii nor Lu explicitly describe providing a solution to the makefile

template sharing problem, and thereby enabling human programmers to minimize makefile fragment

creation and maintenance costs by sharing makefile fragments across collection, product, file, action,

and platform types, however, the structural elements described in the claim have been shown to

exist in the system disclosed by Fujii modified by Lu. Accordingly, the system of Fujii modified by

Lu must inherently provide a solution to the makefile template sharing problem, and thereby enable human programmers to minimize makefile fragment creation and maintenance costs by sharing makefile fragments across collection, product, file, action, and platform types.

Regarding claim 7:

The rejection of claim 1 is incorporated, and further, Fujii des not explicitly disclose a product build order. Lu discloses in an analogous system for generating makefiles a product build order as claimed ("another make utility will be launched as a new make process which will operate to block further interpretation of makefile wrapper until make utility completes its operations" in paragraph 0134. This prevents the make command from operating out-of-order and causing errors.). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the product build order of Lu with the system for generating makefiles disclosed by Fujii, as this would ensure that a single make operation can be completed without another operation interrupting the process. Neither Fujii nor Lu explicitly describe providing a solution to the multiple product build order problem, and thereby enabling human programmers to specify the construction of multiple output products from a single collection, even where said multiple products must be processed in a particular build order in order to ensure correct results, however, the structural elements described in the claim have been shown to exist in the system disclosed by Fujii modified by Lu. Accordingly, the system of Fujii modified by Lu must inherently provide a solution to the multiple product build order problem, and thereby enable human programmers to specify the construction of multiple output products from a single collection, even where said multiple products must be processed in a particular build order in order to ensure correct results.

Regarding claim 8:

The rejection of claim 1 is incorporated, and further, Fujii des not explicitly disclose a file build

order. Lu discloses in an analogous system for generating makefiles a file build order as claimed

("and the order in which these targets should be built" in paragraph 0026). It would have been

obvious to one of ordinary skill in the art at the time the invention was made to use the file build

order of Lu with the system for generating makefiles disclosed by Fujii, as this would ensure that the

files being processed would be read in the correct order, ensuring that the product being built would

be fully operational and error free. Neither Fujii nor Lu explicitly describe providing a solution to

the product file build order problem, and thereby enabling human programmers to specify a proper

build order for the multiple product file types within a single collection product, even where the

multiple product files must be processed in a particular build order in order to ensure correct results,

however, the structural elements described in the claim have been shown to exist in the system

disclosed by Fujii modified by Lu. Accordingly, the system of Fujii modified by Lu must inherently

provide a solution to the product file build order problem, and thereby enable human programmers

to specify a proper build order for the multiple product file types within a single collection product,

even where the multiple product files must be processed in a particular build order in order to

ensure correct results

Regarding claim 9:

The rejection of claim 1 is incorporated, and further, Fujii des not explicitly parallelism limit

information to calculate and generate parallel makefile targets. Lu discloses in an analogous system

for generating makefiles parallelism limit information to calculate and generate parallel makefile

targets as claimed ("provides the identity of targets for parallelization and the order in which these

targets should be built" in paragraph 0026). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the parallelism limit information of Lu with the system for generating makefiles disclosed by Fujii, as this would enable some instructions to be executed in parallel, thus providing reduced compiling time and improving productivity, as stated by Lu in paragraph 0026. Lu further discloses increasing the productivity of human programmers by generating makefiles that can be executed in parallel to reduce the time required to perform makefile operations (Note paragraph 0026), however, neither Fujii nor Lu explicitly describe providing a solution to the makefile parallel processing problem. However, the structural elements described in the claim have been shown to exist in the system disclosed by Fujii modified by Lu. Accordingly, the system of Fujii modified by Lu must inherently provide a solution to the makefile parallel processing problem.

Regarding claims 14, 16-18, 23 and 25-27:

Claims 14 and 16-18 and claims 23 and 25-27 recite a programmable device and a computer readable memory encoded with data, respectively, for directing a computer to perform the process of claims 5 and 7-9, respectively, and are therefore rejected for the reasons set forth in connection with claims 5 and 7-9, respectively.

Conclusion

10.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trent J Roche whose telephone number is (703)305-4627. The examiner can normally be reached on Monday - Friday, 9:00 am - 6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,

Kakali Chaki can be reached on (703)305-9662. The fax phone number for the organization where

this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR system,

see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system,

contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

                                        Trent J Roche
                                        Examiner
                                        Art Unit 2124

TJR

KAKALI CHAKI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100